

## THE ENERGY GUIDE: HOUSEHOLD APPLIANCE ENERGY EFFICIENCY LABELING

### Introduction

In December 1975, Congress passed the Energy Policy and Conservation Act (EPCA), the primary purpose of which is to "conserve energy by enabling consumers purchasing appliances to compare the energy usage of competing models" (US Federal Trade Commission, *The Appliance Labeling Rule*, 1997). EPCA requires that Energy Guide labels be placed on certain new home appliances including refrigerators, refrigerator-freezers, freezers, water heaters, clothes washers, dishwashers, furnaces, room air conditioners, central air conditioners, and heat pumps. These appliances are covered under EPCA because their energy costs can vary greatly, depending on their construction and design. EPCA also directed standards and labeling for humidifiers and dehumidifiers, clothes dryers, direct heating equipment, kitchen ranges and ovens, and television sets. The Federal Trade Commission (FTC), which shares responsibility for EPCA's implementation, did not include these products in the labeling program, however, stating that there were insufficient differences in energy efficiency among different models.

The National Appliance Energy Conservation Act (NAECA) of 1987 amended EPCA by, among other things, establishing minimum efficiency standards for all EPCA products. In 1988, National Appliance Energy Conservation amendments added fluorescent lamp ballasts. The Energy Policy Act of 1992 added general service fluorescent lamps and general service incandescent lamps, including reflector lamps. It also expanded EPCA to address water efficiency issues by specifying water flow labeling requirements for showerheads, faucets, water closets, and urinals. In 1994 the FTC extended the rule to include pool heaters and certain other water heater types.

### Program Summary

Under EPCA, the FTC was given responsibility for establishing the format of the Energy Guide labels, while the Department of Energy (DOE), then the Federal Energy Administration, was given responsibility for promulgating standardized test procedures and minimum efficiency standards, and conducting a consumer education program to complement the labeling program.

The original label design was announced by the FTC in 1979; it required the disclosure of an appliance's estimated annual operating cost as well as a comparison with similar models. For room air conditioners and furnaces only, where variations in climate make a national average meaningless, an energy rating figure was required on the labels. For all other appliances covered by the law, it was required that labels disclose the cost of the average annual energy use for the appliance in dollars and a comparison with similar models. The FTC has since revised the format of these labels. Critics pointed out that expressing the energy use in dollars could be confusing because the cost of energy changes over time. When energy prices changed by more than 15 percent from the previous baseline, the FTC required that new Energy Guide labels incorporate the

new energy prices into their operating cost figures. This meant that two identical appliances on the same storeroom floor could be labeled with two different operating costs, if energy prices changed between manufacture dates. Comparisons among different models and brands were also thrown off by this discrepancy, creating confusion among consumers.

On July 1, 1994, partly in response to this criticism, the FTC announced amendments to the labeling requirements to make the label more "user-friendly." Among other things, the new specifications require that primary energy use disclosures, previously given as estimated operating cost, now be given in units of energy consumed per year. Estimated yearly operating cost is still given in some cases, but it appears as a smaller figure toward the bottom of the label, allowing the energy consumption figure to dominate as the primary figure on the label. Where given, the operating cost is accompanied by the energy price used in its calculation, making explicit the fact that the cost is simply a snapshot indicator and does not take in to account energy cost fluctuation over time. Under this system, every appliance's primary energy use disclosure is a unique, fixed figure. Although the labels vary somewhat for different types of appliances, they all contain specific information on energy efficiency and costs. The current rule requires that, for covered products other than fluorescent lamp ballasts, lamps, and plumbing fixtures, the text of the labels include:

1. the manufacturer, model number, type of appliance, features, and size, all listed at the top of the label;
2. a number in the center of the label which is either the appliance's energy consumption per year or the energy efficiency rating (for room and central air conditioners, heat pumps, and furnaces). Energy consumption may be given in kilowatt-hours, therms, or gallons per year, depending on the type of fuel consumed. Energy efficiency ratings are presented such that the higher the number, the more efficient the appliance and the less it costs to operate;
3. the "range of comparability" published by the FTC, showing the energy consumption or energy efficiency rating of the most and least efficient models of similar size and features, placed at either end of a bar below the appliance's energy use figure. This figure is marked with a triangle at the appropriate position along the bar to convey how the appliance compares with similar models; and
4. for most products, a boxed number at the bottom giving the appliance's estimated yearly operating dollar cost based on the national average fuel cost in effect at the time the range of comparability specified for that product was published. This national fuel cost and any other assumptions used to calculate the figure are stated below the box. For central air conditioners, heat pumps, and furnaces, annual operating cost information does not appear on the label, but rather must be given separately on fact sheets available through the manufacturer or in product directories compiled by industry trade associations.

Products not included in the above descriptions must meet different labeling requirements. Fluorescent lamp ballasts and luminaries containing such ballasts must be labeled with an encircled "E" indicating compliance with DOE minimum efficiency standards. Covered lamps must be labeled with such figures as the electrical power consumed, its light output, and lamp life

expressed in hours. Manufacturers of showerheads, faucets, toilets, and urinals must disclose their products' flow rate in terms of water used per flush, minute, or cycle.

### **Program Methodology**

The primary purpose of EPCA is to "conserve energy by enabling consumers purchasing appliances to compare the energy usage of competing models" (US Federal Trade Commission, *The Appliance Labeling Rule*, 1997). To accomplish this goal most efficiently, the FTC included only those appliances for which there was a significant potential for a reduction in energy use due to altered consumer purchasing behavior. For this reason, only those appliances that showed significant differences in energy efficiency among different models were included in the Energy Guide program.

As an information disclosure requirement, the Energy Guide program does not set product criteria or evaluate individual products. The FTC does, however, establish the format of the labels. It also requires that manufacturers of regulated appliances submit their energy consumption or energy efficiency rating as determined through standardized DOE test procedures. This enables the FTC to publish the annual range of comparabilities for each appliance. When the range of comparability changes by more than 15 percent, the FTC requires that manufacturers print new labels incorporating the new range.

### **References**

Federal Trade Commission. "FTC Updates Energy-usage Disclosures for Home Appliances: New Labels to be Simpler, More Useful to Consumers, FTC Says." *FTC News* May 24, 1994.

Mills, James. Attorney, Federal Trade Commission. Personal communication with Abt Associates, Summer 1997.

US Federal Trade Commission. "Rule Concerning Disclosures Regarding Energy Consumption and Water Use of Certain Home Appliances and Other Products Required Under the Energy Policy Act ('The Appliance Labeling Rule')." *Code of Federal Regulations* 16 CFR 305. January 1, 1997.

US Federal Trade Commission. "Rule Concerning Disclosures Regarding Energy Consumption and Water Use of Certain Home Appliances and Other Products Required Under the Energy Policy Act; Final Rule." *Federal Register* 59 FR 34014. July 1, 1994.

US Federal Trade Commission. "The US Appliance Labeling Rule." May 20, 1997.

## **Product Categories**

Refrigerators  
Refrigerator-freezers  
Freezers  
Room air conditioners  
Central air conditioners  
Heat pumps  
Water heaters  
Furnaces  
Dishwashers  
Clothes washers  
Fluorescent lamp ballasts  
General service fluorescent lamps  
General service incandescent reflector lamps  
Medium base compact fluorescent lamps  
Showerheads  
Faucets  
Toilets  
Urinals  
Pool heaters